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Supplemental Table 1. Correlation between the amplitudes of pupil response to full field stimulation with different colors measured by pupillography among glaucoma patients and controls

		Control				
Glaucoma		White	Red	Green	Blue	Yellow
	White		0.91	0.91	0.92	0.94
	Red	0.89		0.89	0.90	0.91
	Green	0.95	0.89		0.94	0.94
	Blue	0.93	0.91	0.95		0.92
	Yellow	0.96	0.91	0.96	0.94	

Presented Pearson correlation coefficient of the right eye for each individual.

All pairwise correlations were significant (p-value<0.05) after Bonferroni correction.

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Supplemental Table 2. Correlation between the amplitudes of pupil response to stimulation of varied patterns and intensities measured by pupillography among normal subjects and glaucoma patients

		Control		
Glaucoma		Full field Bright	Peripheral Bright	Peripheral Dim
	Full field Bright		0.85	0.78
	Peripheral Bright	0.83		0.77
	Peripheral Dim	0.88	0.85	

Presented Pearson correlation coefficient of the eye with smaller amplitude for each individual. All pairwise correlations were significant (p-value<0.05) after Bonferroni correction.

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Supplemental Table 3. Associative models in detecting glaucoma using pupillography developed by different methods and their sensitivity, specificity, and area under the receiver operating characteristics curve (AUROC). Within-eye pupil metrics were centered at the mean of controls instead of zero

	Odds ratio (95% Confidence Interval)				
	Univariate	**Combined model**	**Stepwise forward**	**Forward selection (Akaike information criterion)**	**Full model**
Age (per 1 year older)	1.06 (1.03 to 1.10)	1.04 (1.00 to 1.08)	1.03 (0.99 to 1.07)	1.03 (0.99 to 1.07)	1.03 (0.99 to 1.08)
Between-eye					
Amplitude (per 0.1 unit)	1.97 (1.55 to 2.51)	1.78 (1.38 to 2.28)	1.70 (1.29 to 2.12)	1.64 (1.26 to 2.13)	1.67 (1.27 to 2.19)
Latency (per 0.1 unit)	1.35 (1.10 to 1.65)	-	-	-	0.98 (0.74 to 1.30)
Time to Max Dilation (per 0.1 unit)	1.87 (1.42 to 2.46)	-	1.60 (1.15 to 2.24)	1.60 (1.14 to 2.25)	1.52 (1.06 to 2.17)
Within-eye					
Amplitude (per 0.1 unit)	1.07 (1.02 to 1.12)	1.06 (1.00 to 1.11)	-	-	1.03 (0.97 to 1.10)
Latency (per 0.1 unit)	1.05 (1.00 to 1.10)	-	-	-	0.99 (0.93 to 1.05)
Time to Max Dilation (per 0.1 unit)	1.18 (1.06 to 1.31)	-	1.17 (1.02 to 1.31)	1.17 (1.02 to 1.33)	1.17 (1.02 to 1.34)
Individual-eye					
Amplitude (per 0.1 ratio decrease)	5.36 (2.77 to 10.38)	2.13 (0.99 to 4.55)	-	1.83 (0.78 to 4.29)	2.26 (0.92 to 5.58)
Latency (per 0.01 sec)	1.42 (1.23 to 1.64)	-	1.23 (1.04 to 1.46)	1.20 (1.01 to 1.43)	1.09 (0.87 to 1.36)
Time to Max Dilation (per 0.1 sec)	1.43 (1.06 to 1.93)	-	-	-	1.37 (0.86 to 2.18)
Overall					
AUROC	0.78 (0.73 to 0.84)	0.85 (0.79 to 0.90)	0.86 (0.82 to 0.91)	0.87 (0.82 to 0.91)	0.87 (0.83 to 0.92)
Sensitivity (at specificity=80%)	0.68 (0.61 to 0.77)	0.76 (0.66 to 0.84)	0.74 (0.66 to 0.84)	0.76 (0.65 to 0.86)	0.77 (0.64 to 0.87)
Specificity (at sensitivity=80%)	0.47 (0.32 to 0.66)	0.70 (0.54 to 088)	0.70 (0.58 to 0.85)	0.75 (0.56 to 0.87)	0.77 (0.62 to 0.88)